

U.S. Serial No. 10/501,983
Amendment
Response to OA dated 6-14-05

Atty. Docket No.: 740819-1077

REMARKS

Confirming the brief telephone interview held with Examiner Doan on September 12, 2005, claim 1 has been revised to more clearly distinguish the invention from the prior art of record.

In the Office Action mailed June 14, 2005, claims 1-3 were rejected under 35 U.S.C. § 102(e) over the Kawanishi '966 patent. In particular, claim 1 was rejected on the basis of Figure 14, which illustrates the cross-section of a polarization-maintaining fiber having a core A1, a cladding A3, and a pair of stress applying parts A2 overlapping the cladding A3 and being disposed primarily in an over cladding. At the outset, it should be recognized that the stress applying parts A2 do not constitute the recited "marking portion for indicating a polarization plane to be maintained, ...", but instead actually serve to maintain the polarization of light propagating through the core A1. However, to even more clearly distinguish the invention from the optical fiber illustrated in Figure 14, claim 1 now recites "wherein polarization of light propagating through said core is maintained exclusively by said thin holes in said clad layer." As there is no suggestion whatever in the Kawanishi '966 patent of the use of a pattern of holes to maintain a polarization plane, but only to serve as a defraction grating to confine light propagating through the fiber to the core of the fiber, amended claim 1 is clearly patentable over the Kawanishi '966 patent.

Claim 2 is patentable at least by reason of its dependency upon amended claim 1.

Claim 3 is patentable not only by reason of its dependency upon claim 1, but for its recitation that "the marking portion is a hole extending along the axis of the fiber." By contrast, the stress applying parts A2 of Figure 14 are "filled with a material for stress application, ..." (see col. 6, line 24). Accordingly, claim 3 is clearly patentable over the prior art of record.

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New claim 4 is patentable not only for its dependency upon claim 1, but for its recitation that the marking portion "is spaced apart from said thin holes in said clad layer ...". Accordingly, if the cladding A3 of the '966 patent included a plurality of thin holes, the stressed portions A2 would not be "spaced apart" from such holes; instead, they would be adjacent to them. Accordingly, new claim 4 is clearly patentable over the '966 patent.

New claim 5 is patentable not only by reason of its dependency upon claim 4, but for its recitation that "said marking portion is spaced apart from said clad layer." By contrast, the stressed portions A2 actually overlap the cladding A3 in Figure 14. Accordingly, this claim is clearly patentable.

New claim 6 is patentable not only by reason of its dependency upon claim 5, but for its recitation that "said clad layer has a substantially circular cross-section." By contrast, the cross-section of the cladding A3 is not "substantially circular"; instead, it is distorted by the intrusion of the stressed portions A2.

Finally, new claims 7 and 8 are patentable not only by reason of their dependency upon claim 3, but for their recitation that the marking portion is a pair of opposing holes in the over clad layer "spaced apart" from said clad layer, as well as the recitation that the marking portion "is a single hole" in said over clad layer spaced part from said clad layer.

Now that all the claims are believed to be patentable, the prompt issuance of a Notice of Allowance and Issue Fee Due is hereby earnestly solicited.

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The Commissioner is authorized to charge any overage or shortage of fees connected with filing of this Amendment to Deposit Account No. 19-2380.

Respectfully submitted,

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Marked-up
APPLICATION DATA SHEET

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